

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	Thomas Werner, et al	Examiner:	Daborah Chacko Davis
Serial No.:	10/691,274	Group Art Unit:	1756
Filed:	October 22, 2003	Atty Docket:	2000.105300
		Client Docket:	DE0302
For:	Technique For Reducing Resist Poisoning In Forming A Metallization Layer Including A Low-K Dielectric	Confirmation No.:	4933

REPLY BRIEF

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Applicants hereby submit this Reply Brief to the Board of Patent Appeals and Interferences in response to the Examiner's Answer dated July 9, 2008, the Final Office Action dated August 20, 2007 and the Notice of Appeal dated October 30, 2007.

It is believed that no fee is due; however, should any fees under 37 C.F.R. §§ 1.16 to 1.21 be required for any reason, the Commissioner is authorized to deduct said fees from Williams, Morgan & Amerson, P.C. Deposit Account No. 50-0786/2000.105300.

REMARKS

The Examiner's Answer repeatedly states that the feature of nitrogen-containing volatile materials diffusing through the low-k dielectric layer is not recited in the claims. However, it is not required that the problem being solved be recited in the claims. It is the process steps that achieve a result directed to mitigating the identified problem. The Examiner attempts to combine McGahay that teaches a low-k dielectric layer and a cap layer with Vines that show heat treating a silicon dioxide layer to remove water, hydrogen, and hydrocarbon impurities. The issue is not whether nitrogen containing impurities are recited in the claims, but rather whether one of ordinary skill in the art would be motivated to combine McGahay and Vines, and whether the combination teaches all features of the claimed subject matter.

Vines that specifically recites that the impurities being addressed are water, hydrogen, and hydrocarbon impurities. Clearly, Vines does not contemplate problems arising from nitrogen or nitrogen compounds diffusing through a low-k dielectric. Because, neither McGahay nor Vines recognizes that impurities diffusing through the low-k dielectric layer have an impact on resist poisoning, there is no reason one of ordinary skill in the art would make such a combination. The only motivation provided for the combination is the recognition provided in Applicant's specification. The Office uses improper hindsight reasoning for making the combination. The types of impurities described in Vines are simply not an issue with the process employed by McGahay or the process taught by Applicants and set forth in the claimed subject matter.

For these reasons, the combination of McGahay and Vines fails to teach or suggest the claimed subject matter. Accordingly, claims 1, 11, and all claims depending therefrom are allowable. Applicants respectfully request the rejection of these claims be reversed.

Respectfully submitted,

Date: September 9, 2008

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